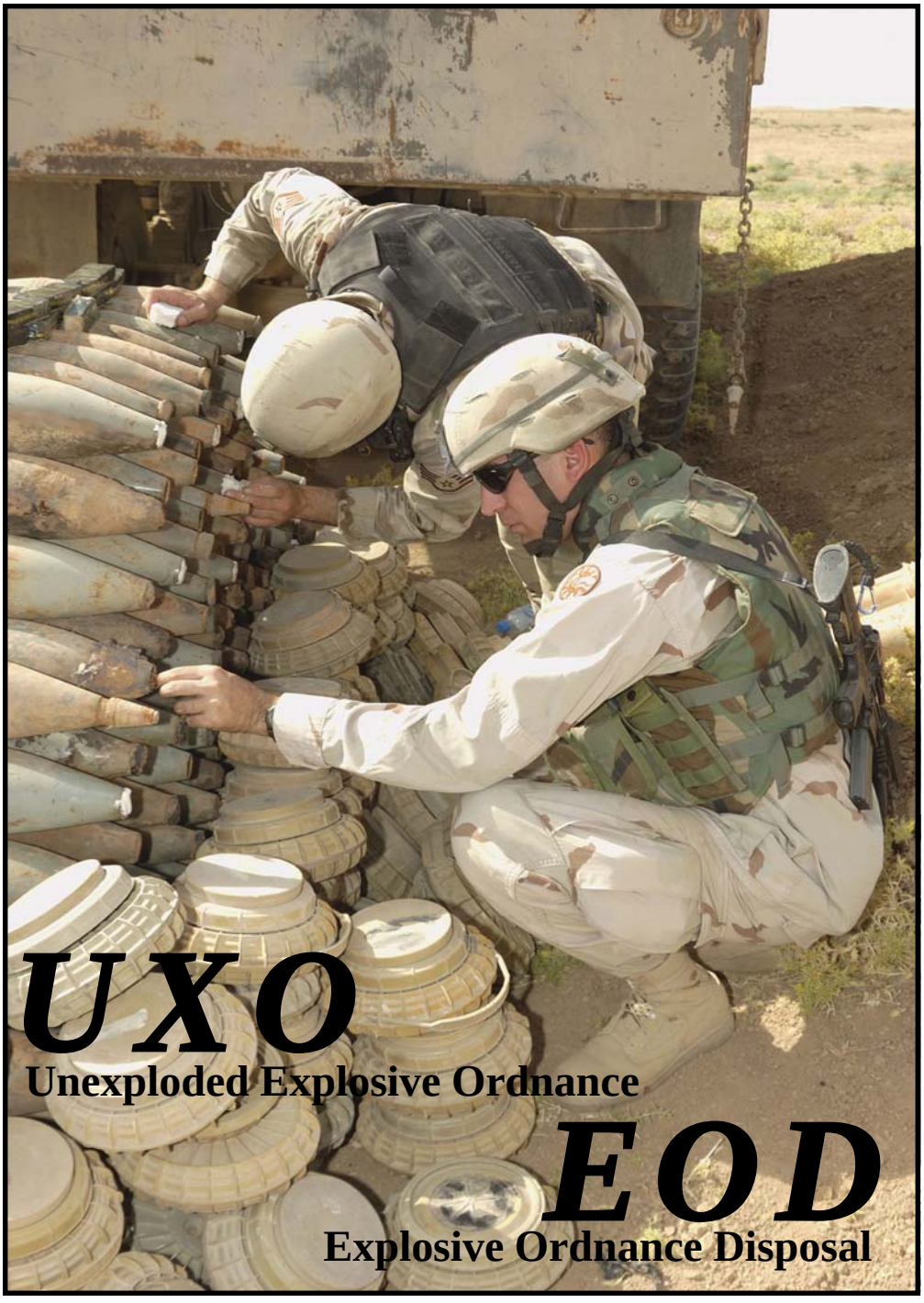
THE AIR LAND SEA BULLETIN

Issue No. 2005-3 | **Air Land Sea Application (ALSA) Center** | *September 2005*

IN HOUSE

FEATURE ARTICLES



Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
SEP 2005		**00-00-2005 to 00-00-2005**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
The Air Land Sea Bulletin. Issue No. 2005-3, September 2005	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Air Land Sea Application (ALSA) Center,114 Andrews St,Langley AFB,VA,23665-2785**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**Same as Report (SAR)**	**24**	

THE AIR LAND SEA BULLETIN (ALSB)

Air Land Sea Application (ALSA) Center
114 Andrews Street
Langley AFB VA 23665-2785

Air Land Sea Bulletin Staff

Director
COL Michael Martinez, USA
DSN 575-0960
COMM (757) 225-0960
alsadirector@langley.af.mil

Deputy Director
COL(S) Robert Givens, USAF
DSN 575-0959
COMM (757) 225-0959
alsadirector@langley.af.mil

Publications Officer
MAJ Bob Finn, USA
DSN 575-0965
COMM (757) 225-0965
alsad@langley.af.mil

Editor
Beatrice L. Waggener, Civilian, USAF
DSN 575-0850
COMM (757) 225-0850
alsaeditor@langley.af.mil

Publications NCO
TSgt Jorge Venegas, USAF
DSN 575-0848
COMM (757) 225-0848
Jorge.Venegas@langley.af.mil

Layout
Andrea Lard, Civilian, USN
DSN 575-0908
COMM (757) 225-0908
andrea.lard@langley.af.mil

Purpose: *ALSA Center publishes The ALSB three times a year. ALSA is a multi-Service DOD field agency sponsored by the U.S. Army Training and Doctrine Command (TRADOC), Marine Corps Combat Development Command (MCCDC), Navy Warfare Development Command (NWDC), and Headquarters Air Force Doctrine Center (AFDC). This periodical is governed by Army Regulation 25-30, Chapter 10. It is a vehicle to "spread the word" on recent developments in warfighting concepts, issues, and Service interoperability. The intent is to provide a cross-Service flow of information among readers around the globe.* ***Disclaimer: Since The ALSB is an open forum, the articles, letters, and opinions expressed or implied herein should not be construed to be the official position of TRADOC, MCCDC, NWDC, AFDC, or ALSA Center.***

Submissions: We solicit articles and reader's comments. Contributions of 1500 words or less are ideal. Submit contributions, double-spaced in MS Word. Include name, title, complete unit address, telephone numbers, and e-mail address. Graphics can appear in an article, but you must also provide a separate computer file for each graphic. Send e-mail submissions to **alsaeditor@langley.af.mil**. ALSA Center reserves the right to edit content to meet space limitations and conform to *The ALSB's* style and format. **Next issue: January 2006; Submission DEADLINE: COB, November 15, 2005.**

Mailing/Distribution: This publication is packaged for mailing by the ALSA Center and distributed by ATZG-BO-M, Bldg 183, McNair Drive, Ft Monroe VA, 23651.

Reprints: *ALSA Center* grants permission to reprint articles. Please credit the author and *The ALSB*. Local reproduction of *The ALSB* is authorized and encouraged.

Subscriptions: We continue to validate our subscribers's information and requirements. If you wish **to discontinue your subscription** of *The ALSB,* please contact the Editor by telephone or e-mail.

ALSA PUBLICATIONS—ON THE WORLDWIDE WEB (WWW)

Visit our homepage: http://www.alsa.mil or
Classified Web site: http://www.acc.af.smil.mil.alsa

The ALSB*—**From our homepage you can access current and past issues. ***Other ALSA Center Publications— Executive summaries for all publications are available with a hyperlink to access them. Most current publications can be downloaded from the homepage from a *.mil* domain; restricted distribution publications can be downloaded at the above mentioned classified Web site.

ALSA publications are in portable document format (PDF) extension. You must have *Adobe Acrobat Reader* and a WWW browser such as *Internet Explorer* or *Netscape Navigator* to read, copy, or print these documents.

Also on our homepage you'll find information about ALSA Center's mission, its association with other doctrinal organizations, who's on our staff, and how we're organized.

You'll find our homepage is uncomplicated and easy to navigate. This makes it more usable for individuals new to using the internet and for units using slower circuits and older software. If you have suggestions for improving the site, please send your ideas to alsawebmaster@langley.af.mil.

Cover Photo — USAF Photo by Tech Sgt Christopher Gishm

Director Comments — Welcome to the New Deputy Director and an Overview of the MTTP Publications

The Air Land Sea Application (ALSA) Center located at Langley AFB, Virginia, continues to publish multi-Service tactics, techniques, and procedures (MTTP) focusing on meeting the "*immediate needs of the warfighter*." We have been fortunate to have our new Air Force Deputy Director report in after completing his studies at the National War College. Colonel (select) Robert "Snort" Givens arrived here the end of June with his wife Carla and two boys Morgan and Mitchell. With his A-10 and F-16 background as well as his multiple combat tours, he is a welcome addition to the ALSA team. The action officer vacancies over the past year have also been filled. We have gained four new officers this summer: three Army and one Air Force.

Our building has been under major reconstruction, repairing hurricane damage since January. Finally, with the 5-month construction project complete, life at ALSA will get back to normal and we look forward to a productive FY 06.

Recently completed publications include *Joint Fires, Brevity, Kill Box, Unexploded Ordnance Disposal, and Tactical Convoy Operations*. Ongoing efforts at the ALSA Center include the development or revision of MTTPs on *Aviation Urban Operations, Explosive Ordnance Disposal, Detainee Operations, and Cordon and Search*. The *Cordon and Search* MTTP is now being written and the second Joint Working Group for this pub was held in August to finalize the first cut of the document. Latest initiatives for potential publications to be presented to the Joint Action Steering Committee (JASC) are *Technical Intelligence* and *Employment of Tactical Unmanned Aerial Vehicles* (UAV). ALSA will request JASC approval for these MTTPs which will be produced on the normal 12-month timeline. The final version of *Detainee Operations* continues to elude us as we are adjudicating extensive comments received from the Services. Understandably a contentious and timely publication, we endeavor to get a product to the field as quickly as we can, aimed at the tactical-level operating units.

We welcome publication topics that fill interoperability or doctrinal voids between the Services. Those that make it through the program approval process are normally produced within one year and become Service doctrine for all Services. FY 06 is shaping up to be a busy year for ALSA as we continue to support the Services and deployed units in Iraq and Afghanistan. For more information on any of the MTTPs available here at ALSA, or to recommend a new MTTP topic for development, visit our Web site at http://www.alsa.mil or contact us at alsa.editor@langley.af.mil.

MICHAEL R. MARTINEZ, Colonel, USA
Director

ALSA MTTP Publications for UXO and EOD— Are Being Revised to Meet the Immediate Needs of the Warfighter

By
LTC Lou Schurott, USA
Lt Col Rob McCreadie, USAF
ALSA Center

Unexploded explosive ordnance (UXO) saturation has become a characteristic of the modern battlespace and will likely continue to threaten military forces. US personnel have been killed or injured by these dangers in virtually every conflict or contingency in which the United States has participated. This can be attributed primarily to unfamiliarity with UXO countermeasures and avoidance procedures. To this end the Air Land Sea Application (ALSA) Center is revising the multi-Service tactics, techniques, and procedures (MTTP) publication for *Unexploded Explosive Ordnance (UXO) Operations*.

The purpose of this MTTP publication is to provide commanders and their units guidelines and strategies for operating in an environment with UXO hazards, while minimizing the impact of these hazards on friendly operations. This publication will facilitate coordination, integration, and force protection requirements regarding UXO during joint exercises, contingencies, or other operations. It will provide warfighting personnel at the operational and tactical levels with information to optimize UXO safety and to increase efficiency, while reducing or eliminating losses of personnel and equipment to UXO hazards.

The revised MTTP describes the UXO threat to friendly forces and operations while providing guidelines for planning, reporting, tracking, and marking UXO hazards and training recommendations for the joint force. The MTTP reflects an update to Service-specific UXO missions and capabilities while delineating the roles of explosive ordnance disposal (EOD) and engineer units with regard to UXO hazards.

It addresses UXO hazards, procedures for avoiding UXO hazards, and a description of unique Service capabilities. The MTTP appendices are quick reference sources defining specific skills needed when UXO hazards are encountered. ALSA's intent with the revision of this publication is to define UXO hazards and to describe the degree of risk for different operational categories (such as maneuver, air assault, aviation, amphibious, and air base operations). It also describes the responsibilities for planning and executing a joint operation with UXO hazards. There is detailed information which introduces the UXO reporting, marking, and tracking requirements and defines considerations for planning and conducting operations with UXO hazards. It also defines options commanders may use when confronting UXO hazards. A highlight of this publication is the chapter that outlines individual Service missions, command and control (C2) structures, and specific capabilities of engineer and EOD forces of each Service.

In conjunction with the revision of the UXO operations MTTP publication, ALSA is revising the MTTP for *Explosive Ordnance Disposal (EOD) in a Joint Environment*. Countering UXO and the threat it creates during all operations is challenging. This EOD MTTP publication provides the necessary command structure to assist (rather than impair) efficient EOD operations. This challenge becomes easier as the level of knowledge regarding other Services' EOD forces and their contributions to the mission increases.

The purpose of the EOD publication is to identify standard tactics, techniques, and procedures (TTP) among the Services for planning, integrating, and executing EOD operations in a joint environment. It sets forth TTP to assist joint activities and performance of the entire EOD force and establishes the procedures necessary

to protect all US military and multinational personnel and operations. It provides guidance and procedures for the employment of an EOD force throughout the range of military operations.

The EOD publication documents the C2 considerations and procedures for conducting EOD operations in a joint environment. C2 TTP are necessary to coordinate and integrate multi-Service EOD operations to facilitate efficient and safe joint EOD operations. The EOD force has performed in a joint capacity during many recent operations; however, most of the command relationships and coordination requirements were ad hoc. Each Service routinely deploys EOD forces into a theater and assigns the force based on Service needs rather than the theater needs as a whole. This MTTP provides many considerations for employing EOD forces in a joint capacity and provides C2 options for the geographic combatant commander and commander, joint task force (CJTF) to consider. It also highlights the EOD capabilities and force structures for each Service.

By capturing methods used to coordinate joint EOD operations, this publication offers three command relationship options in how to best employ the entire EOD force:

•Service-component responsibility (with direct liaison authorized [DIRLAUTH]).

•Lead-Service component (with or without tactical control [TACON] or operational control [OPCON] of other Service EOD forces).

•Subordinate EOD Joint Task Force (EOD JTF).

Other C2 considerations when utilizing these command relationship options include the flexibility for the geographic combatant commander or CJTF to modify or mix these options to the theater mission, threat, and situation. This MTTP establishes methods for creating a joint EOD operations center (JEODOC) to assist and streamline the management of EOD operations at a single command, normally under the direction of the J-3.

The first chapter provides an introduction to the Department of Defense (DOD) EOD mission, capabilities, and common characteristics of the EOD force. It also gives a historical perspective of EOD operations and the impact the threat has had on US operations.

USN PHOTO BY PH1 AARON ANSAROV

The second chapter describes the purpose for conducting EOD operations as a joint force, provides historical examples, and employment options for the joint force commander (JFC) to consider when employing EOD forces. This chapter also provides guidance for standing up a JEODOC.

Chapters three through six provide the reader an understanding of Army, Marine Corps, Navy, and Air Force EOD operations to include each Service's EOD mission, Service doctrine, Service organizations and capabilities, and Service-specific EOD training.

Improvised Explosive Device 101

By
Tom Wiggans
Alion Science and Technology

The historical use of improvised explosive devices (IEDs) in both conventional and non-conventional warfare extends back several generations and spans numerous conflicts. As originally introduced, IEDs of the past were concealed and contact-triggered mechanisms solely designed to inflict casualties and impact the war time mission.

The term IED, in its current form, is a fairly new reference. The concept has its roots in situations where booby traps and land and waterborne mines were employed, often with great effectiveness. During both small- and large-scale conflicts of the last century, the use of mines in harbors and in important waterway channels successfully disrupted, even if only temporarily, the vital resupply routes carrying troops, equipment, and supplies.

In Vietnam, anti-personnel mines were a particularly horrific scourge in that they could be swiftly and easily emplaced anywhere ranging from a well-traveled jungle path, a remote rice patty, or a crowded urban gathering place. Their use severely influenced and negatively impacted collective troop and supply movements throughout the overall battlespace.

Over time and simply through salt water intrusion, most maritime mines decayed and broke free of their anchor mooring, rendering them significantly less lethal. To the contrary, one of the most insidious characteristics of early land mines and booby traps is that these types of weapons loose virtually none of their effectiveness, in other words, they rarely wore out. Today, land mine clearance is an enormous challenge in many parts of the world where their employment was at one point prolific, even well after the conflict that spawned their original use was over.

Enemy tactics, techniques, and procedures (TTP) relative to the use of IEDs in the current conflict in Iraq have progressed through a series of complex enhancements. This has clearly demonstrated the enemy's willingness and ability to adapt to the efforts designed to defeat the IED threat. IED use throughout the Operation Iraqi Freedom (OIF) battlespace has been limited only by the imagination of a persistent insurgent force.

Early Iraqi insurgent IED TTP included only minimal efforts of concealing the IED from detection by US and coalition forces. As awareness of the threat increased, so did the collective ability of the insurgents to hide, camouflage, and remotely detonate emplaced IEDs. Techniques used by the insurgents have included such imaginative methods as melting detonation cord into the roadbed, concealing C-4 in animal carcasses left along the highway, and forcing a detour with debris or objects towards an abandoned vehicle packed with explosives, then triggering it to inflict maximum damage.

The evolution of enemy TTP has since progressed to include the use of basic electronic signals in order to remotely trigger an explosive package strategically placed near a known well-traveled thoroughfare. Devices as simple as remote garage door openers and cordless telephones have been used to set off IEDs. These techniques allow the insurgent the opportunity to maintain a significant stand-off distance while they observe their target, detonate the IED at an appropriate time of their choosing, then effect an easy escape.

The geographics of the OIF theater have required an enormous amount of over-land convoy operations carrying US and coalition personnel along with a wide variety of supplies, fuel, and equipment. These convoys often consist of extended lines of long-haul tractor trailers interspersed with armored and armed vehicles which provide cover, firepower, and operational coordination. Road conditions in Iraq are often rugged at best, which serves as a direct disadvantage to the convoy, whose most significant asset is a high speed of travel.

Even a poorly designed, inaccurately triggered, and relatively small IED possesses the potential to significantly disrupt a convoy operation, of which there are hundreds per day, collectively traveling tens of thousands of miles throughout Iraq. Due to the detrimental impact IEDs have on the success of convoy operations, there has been concerted effort expended on the development and testing of potential IED defeat devices for employment on the battlefield. In addition, there has been a jointly-staffed, interdisciplinary IED Defeat Task Force assembled with a charter specifically aimed at identifying capability gaps and recommending formalized solutions to the challenge of IEDs. In general, potential devices targeted towards defeating the IED threat include electronic signal jammers, sensitive explosive detection equipment, and sensors that capture before and after depictions of the roadway in order to see what details might have changed since the last safe passage of a convoy.


USA PHOTO BY SPC. RONALD SHAW JR.

Though testing and fielding of this type of equipment is ongoing, the most effective means of defeat remains avoidance. Clearly, however, simple avoidance is not always an option as convoy routes often proceed through urban environments and over bridges which can serve as natural chokepoints. Other tactics such as increasing the armor protection of vehicles helps with survivability, and increased firepower raises the response capability, but neither of those methods helps avoid the IED in the first place.

Another evolutionary aspect of IEDs has been their transition into a vehicle-borne weapon, commonly referred to as a VBIED. Placing the IED in a vehicle inherently enables the enemy to increase the kill zone by filling a larger space with more explosives, as well as greatly increasing the range of employment and detonation accuracy. A VBIED could be an abandoned vehicle alongside any road, or it could include an actual driver resolved to commit suicide during the actual conduct of their attack. Defeat techniques for these types of actions can vary greatly, but center around the response of those members of the convoy carrying significant firepower. Hopefully those that can bring large caliber weapons to bear can identify the threat at a significant distance, engage the target with the largest available crew-served weapon, and effectively mitigate or destroy the VBIED before it gets close enough to inflict any impacting damage.

Even a poorly designed, inaccurately triggered, and relatively small IED possesses the potential to significantly disrupt a convoy operation. . .

IED awareness is now an integral part of any convoy operation briefing package. Each member of the convoy, regardless of an individual's role or responsibilities, needs to serve as a watchful eye for any suspicious activity, object, or persons along the route. If an item or a vehicle alongside the roadway appears out of place and serves to raise caution, prudence dictates to avoid that object or person if at all possible. If that action is not feasible, they should make the convoy commander aware of its presence, ensure the entire convoy moves well clear of any potential danger, and then call the report in to the appropriate command level describing particulars of the sighting. Inherent in that action is the potential for the enemy to stage an ambush further down the convoy route when the operation is halted while relaying the sighting of an earlier incident. Vigilance remains the watchword for any convoy at all times while any of their individual elements are transiting between established safe zones.

Even as IED defeat technology improves and lessens the effectiveness of the current threat, US and coalition forces

See **IED 101** page 14

IED—The Challenge in Operation Iraqi Freedom

By
Command Sergeant Major
James H. Clifford, USA
52d Ordnance Group (EOD)
Fort Gillem, Georgia

Operation Iraqi Freedom (OIF) once again verified that the combat power of the United States military is without peer. Our forces, along with those of the coalition, soundly defeated the Iraqi military in quick order with a minimum of loss to the coalition, the Iraqi populace, or damage to the Iraqi infrastructure. However, rather than surrendering in large numbers, as in Operation Desert Storm, or remaining intact in a cooperative posture, most of Iraq's military merely faded away, the bulk of those returning to their homes with their weapons. The Coalition Provisional Authority summarily dismissed those that remained without recognition or compensation.

This dissolution of the Iraqi military may have been a contributing factor to the challenges the coalition is grappling with today. Without the native manpower to secure the borders with Iran and Syria, or to secure the large number of ammunition supply points (ASP) located throughout the country, Iraq was fertile ground for the terrorist-led insurgency that has targeted coalition forces and Iraqi civilians.

The primary weapon of the terrorist has been the improvised explosive device (IED) and its mobile cousin, the vehicle-borne IED (VBIED). As of this writing, nearly 500 members of the coalition and an unknown number of Iraqi civilians and soldiers have been killed by IEDs and VBIEDs. Most IEDs are remotely detonated through the use of radio or hard-wired command detonation systems. Others are detonated by suicide bombers driving VBIEDs or wearing IEDs in the form of vests into crowded areas. The raw materials used in these IEDs are munitions that have been pilfered from the unsecured ASPs found throughout Iraq.

Until OIF, the terms IED and VBIED were not widely known or used other than in military explosive ordnance disposal (EOD) and civilian bomb disposal circles. As OIF has progressed, these terms have been used more widely, even by those in the highest levels of our military, political, media, and academic hierarchies. Along with this heightened interest in IEDs has come a host of self-appointed IED experts, most of whom have never personally encountered an IED. The challenge posed by the proliferation of IEDs is complex and multifaceted. To meet these challenges, organizations have been created to specifically address the IED problem. While others in the military and civilian law enforcement and intelligence communities have adjusted their focus toward the IED problem. This effort has been compared to a Manhattan Project like initiatives aimed at IED defeat.

Reaction to the expanded threat posed by IEDs exposes others beyond the preexisting organizations that are specifically authorized to deal with them; that group being the EOD organizations of the four Services. This article describes some principles under which EOD personnel view the IED problem. These principles are not new, but are not as widely known or respected as they should be outside EOD circles. This article will attempt to rectify that shortcoming.

Principle One: An EOD member is the only person trained, equipped, and authorized to take direct action on IEDs. Nobody else!

USN PHOTO BY PH1 AARON ANSAROV

For identification, the term EOD member in this article refers to every EOD trained Soldier, Sailor, Airman, and Marine. By 'trained' I mean that the EOD member is a graduate of the Naval School EOD, currently located at Eglin Air Force Base, Florida, or its predecessor school formerly located at the Naval Ordnance Station, Indian Head, Maryland. An EOD member must also be currently assigned

to an authorized EOD billet. No other military Service member, regardless of his/her specialty, training, rank, or duty position is authorized to attempt to render safe or resolve an IED related situation. Military doctrine and fragmentary orders specifically prohibit all but the EOD member from handling IEDs, yet there are those who inexplicably ignore this doctrine. Although some may be able to identify those exceedingly rare situations when military expediency dictates that a non-EOD member take action to reduce the threat posed by an IED, any Service member who attempts to render safe an IED by any means does so at their own peril, and any leader who orders a non-EOD member to handle an IED almost always exceeds his/her military authority. That leader is morally responsible should that Service member be killed or injured by an IED detonation.

Principle Two: IEDs are not obstacles. They are not to be overcome so you can drive down the road.


USA PHOTO BY TSGT LEE HARSHMAN

Since most IEDs in Iraq are truly 'roadside bombs', some leaders view them as just another obstacle to be breached so that the friendly forces can move on. This is a simplistic and incorrect view. The problem with this approach is that unlike traditional physical obstacles, IEDs are literally attacks upon our forces meant to kill. Reducing an IED by breaking it up or destroying it and then moving on is akin to destroying an enemy soldier's rifle, then leaving that soldier standing on the side of the road to pick up another weapon so he can shoot at the next convoy to come along. Any Soldier with training in heavy equipment or demolition procedures can reduce a traditional physical obstacle because that obstacle doesn't fight back. IEDs are dynamic, deadly, unpredictable, and require a more sophisticated approach. That approach requires a specifically trained EOD member to handle it as delineated in Principle One.

Principle Three: IEDs are contact with the enemy.

•Somewhere nearby is a triggerman and probably a cameraman.

•IEDs must be rendered safe and exploited for intelligence in order to identify and find the bomb maker.

This principle goes to the heart of the matter regarding an IED. OIF, unlike any conflict the US has ever fought, is an IED war. The enemy has chosen to make the IED attack one of the primary methods of engaging us. This principle is related to Principle Two in that IEDs are not just obstacles, they are truly 'contact with the enemy' and must be dealt with as such. In virtually every IED situation, there is a nearby triggerman that will detonate the device at just the right moment. In many cases an initial IED is detonated with the sole purpose of drawing a response of friendly forces. Once those forces are assembled to render aid and investigate the explosion, a secondary IED is detonated by the triggerman with the intent of causing additional injury and death. Also, at each of these events, there is usually an insurgent cameraman documenting the operation for the purpose of propaganda and exploitation of our tactics, techniques, and procedures. Many of these films eventually make it to public media. EOD and intelligence personnel must exploit each IED event for the purposes of identifying the bomb makers. Failure to engage the EOD member in an IED event unnecessarily risks lives and misses opportunities to exploit the IED.


USA PHOTO BY CSM JAMES H. CLIFFORD

See **Challenge** page 14

Meaning of the EOD Insignia

THE WREATH is symbolic of the achievements and laurels gained by minimizing accident potentials, through the ingenuity and devotion to duty of its members. It is in memory of the EOD personnel who have given their lives while performing EOD duties.

THE BOMB was copied from the design of the World War II Bomb Disposal Badge; the bomb represents the historic and major objective of the EOD attack, the unexploded bomb. The three fins represent the major areas of nuclear, conventional, and chemical/biological warfare.

THE LIGHTNING BOLTS symbolize the potential destructive power of the bomb and the courage and professionalism of EOD personnel in their endeavors to reduce hazards as well as to render explosive ordnance harmless.

THE SHIELD represents the EOD mission which is to protect personnel and property in the immediate area from an inadvertent detonation of hazardous ordnance.

EOD—Operations with the 22nd MEU (SOC) During Operation Mountain Storm in Afghanistan

By
CWO2 David S. Pummell, USMC
EOD Officer
22nd MEU(SOC) Command Element

Improvised explosive devices (IEDs), unexploded ordnance (UXO), command-detonated landmines, and booby-trapped items are threats that a small group of Marines belonging to the explosive ordnance disposal (EOD) program have been dealing with everyday. The 22nd Marine Expeditionary Unit (MEU) (Special Operations Capable (SOC)) embedded an EOD team in every aspect of their Marine air-ground task force (MAGTF) operations. When the enemy chose to attack, the EOD team denied them the capability to use their weapons of choice: the command-detonated landmine and IED.

During each phase of their deployment, one of the most dangerous and likely courses of action was the enemy's use of IEDs. The Afghans have endured decades of warfare and have adapted common insurgent techniques to their advantage. The IED is one of the primary weapons used due to the fact that it provides a

USMC PHOTO BY SGT PAUL MANCUSO

considerable amount of gain with little risk assumed. The terrain in Afghanistan is austere and extremely channelized. Often only a single road is trafficable by wheeled or tracked vehicles, which makes selecting potential ambush sites relatively easy for the insurgents. The MEU recognized this fact and studied how they could maneuver within the restricted battlespace while wreaking terror on the enemy. Reasonably mitigating the hazards associated with IED attacks was a mission planning priority and was a continual challenge.

Oruzgan Province, Afghanistan 2004

In late March 2004, the 22nd MEU (SOC) flew into southern Afghanistan and prepared to conduct operations. Their

focus of effort was to push deeper into the country and establish a forward operating base (FOB) near Tarin Kowt, Oruzgan Province, to support the Afghan election process underway by the United Nations. This central Afghan area was virtually ignored by conventional forces and the dire security situation halted any hopes of election registration in an area considered by many as "the Taliban's backyard."

Once they established the FOB, the MEU had a place from which to launch extensive operations to deny the enemy sanctuary while gaining and maintaining contact with small groups of insurgents operating in the rugged mountain terrain. The MEU had literally taken the fight to the enemy with the EOD team alongside in every mission. EOD operations had to adapt to ever changing paradigms to successfully counter new threats in the enemy's backyard. The desired end state being to fight a fluid battle with little to no halts in the lead maneuver elements momentum. This was accomplished by task organization, sourcing and utilizing the technology available, and being forward with the main effort to neutralize explosive threats as they arose.

Commanders realized that in order to ensure success there needed to be a realistic and immediate shift in organization with the understanding that doctrine was dated at times. For this fight, significant changes were made; i.e., EOD was no longer considered a "combat service support (CSS)" element but a vital, specialized, high demand, low-density asset responsible to the MAGTF Commander. Not unlike other small specialized skills, EOD provides timely information and action required by the MAGTF Commander to ensure mission accomplishment and effective force protection.

Pre-deployment Planning and Training

Planning started in the United States and included extensive terrain studies to carefully examine routes, populated areas, and established footpaths used by local goat herders and Taliban fighters alike. Once the terrain was analyzed, the enemy's most likely course of action was "war gamed" for specific high threat areas. The end product was the priority of work that would be used by the EOD team to counter the enemy's threat. As a result, the MEU embedded the EOD team in every aspect of MAGTF operations, from stability and security operations (SASO) to precision raids.

This is when it was identified that the EOD team table of organization needed to be increased and taken from the CSS element and placed in the command element. Once located at the MEU command element (S-3), the EOD headquarters (HQ) team provided support to no less than seven operations at one point during the deployment. They organized and controlled this support under the direction of the MEU Operations Officer. The EOD HQ team consisted of the EOD officer in charge (OIC) and staff noncommissioned officer in charge (SNCOIC) and one EOD technician. They were incorporated in all MAGTF planning sessions to identify EOD requirements and capabilities when needed. They also interacted with intelligence personnel, other government agencies, and sister Service EOD personnel. Their capability to respond to incidents in the immediate FOB area, took off some of the strain of the continuous operations tasked to response teams, allowing them to conduct maintenance from prior missions and prepare for the next upcoming mission usually within a 24-hour period.

The MEU had literally taken the fight to the enemy with the EOD team alongside in every mission.

During the pre-deployment training the MEU sourced a mine countermeasures kit from the II Marine Expeditionary Force (II MEF), which included advanced handheld and remote-operated equipment to augment the existing table of equipment and the new M1114 up-armor high-mobility multipurpose wheeled vehicles (HMMWV) that provided protection from landmine strikes for personnel traveling high-risk areas. The Combat Engineers and EOD technicians received sustainment training on these tools and developed tactics, techniques, and procedures (TTP) in their use to support the maneuver elements. Additional commercial off-the-shelf (COTS) items were identified and purchased to enhance the EOD team's capability and personal survivability. UXO identification classes were held at the platoon level throughout the MEU. This was accomplished by several methods ranging from professional military education (PME) presentations in garrison to impromptu classes in the field

See **EOD** page 15

EOD—History, Combat Roles Today, and a Word About EOD/Engineer Integration

By
LTC Dick A. Larry, USA
Maneuver Support Center
TRADOC System Manager Assured Mobility
EOD/Engineer Integration
Fort Leonard Wood MO

EOD—an Abbreviated History

The capability to neutralize the effects of explosive hazards (in the form of unexploded explosive ordnance (UXO) or improvised explosive devices (IEDs)) has been in existence within the Army since WWII. EOD was formed within the Army in 1941 under the Ordnance Corps based upon the British model of Bomb Disposal (BD). The mission of Army BD in WWII was primarily to render safe/ disposal of UXO (mostly bombs). All responsibility for bomb disposal was placed under the Ordnance Department. The Ordnance Department was also responsible for disposal of incendiaries and bomb reconnaissance. The Army created their EOD School at Aberdeen, MD, in 1942 while the Navy created their mine disposal school in Washington DC Naval Yards. Bomb Disposal units participated in every major campaign, to include D-Day, with distinction and fortitude. The BD squads were disposing of vast quantities of ordnance daily in the European front. Besides performing their primary mission, BD units were called upon to clear minefields, inspect ammunition for serviceability, and remove booby traps. BD personnel were even called upon to assist in surgical removal of ordnance by military doctors during surgery. During the later part of WWII in the European front, the German Army hid caches of ammunition and booby-trapped them. BD personnel were the primary means used to dispose and reduce this hazard. In 1949 all BD units were re-designated as Explosive Ordnance Disposal squads.

In 1951 a decision was made to make the Navy the Single Service Manager for all EOD Training and Technology within DOD. Training was conducted at Naval Ordnance Station, Indian Head, MD. In so doing, the DOD made the decision to deviate from the British EOD model. Each branch of service in British EOD had their own school. This later translated into British Army EOD only handling ground ordnance, British Air Force EOD only handling air-dropped ordnance, and British Navy EOD only handling sea ordnance, and a separate group which dealt with IEDs. These differences are still in existence today. The US EOD program trained EOD personnel from all Services on all ordnance types, so that US EOD personnel were knowledgeable on dropped, surface, sea, nuclear, and chemical ordnance from around the world. From WWII to Korea to Vietnam to Desert Storm to today, EOD personnel have performed explosive ordnance reconnaissance, explosive safety, booby traps and land mine removal, demolition techniques, ammunition supply points (ASP) accident cleanup (similar to ASP 1 cleanup during Vietnam), and render safe of improvise explosive devices (in 1976 in Quincy Illinois, SGM Kenneth R. Foster was the first EOD soldier killed while performing EOD operations on an IED).

Role of EOD in Combat

EOD operational doctrine for Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) is joint:

•Land combat EOD operations are joint Army, Air Force, and Navy units. Army EOD companies are augmented with Air Force and Navy EOD teams.

•EOD response in support of (ISO) Brigade Combat Team (BCT)/Unit of Action (UA) is joint (under C2 of Theater EOD Commander).

EOD companies can provide direct support (DS) for specific missions (during maneuver operations, raids, cordon and search of bomb making facilities) ISO maneuver commanders.

EOD companies also provide general support (GS) because UXO/IEDs and explosive hazards do not recognize battalion/brigades/division boundaries. EOD is a responsive force to all levels of command

EOD companies work in conjunction with Intelligence Teams and all data is relayed to BCT/UA/division/theater.

EOD companies are working well with UA S-3 for implementation and EOD planning in support of combat operations.

EOD Combat Benefits

•Combat Multiplier

–EOD provides IED exploitation/ analysis and is a conduit to the Terrorist Explosives Device Analytical Center (TEDAC) for forensic analysis and bomber identification.

–EOD provides accurate identification of ordnance and IED-making materials.

–EOD provides advanced demolition and render safe capability (EOD render safe of ordnance versus basic demolition).

–EOD provides skill, knowledge, and ability to capture/kill Anti Iraqi Forces (AIF).

•Explosive Safety and Force Protection.

–Non-EOD personnel need better training and emphasis on not to touch explosive items, UXO, and IED components.

–EOD conducts and assists in vulnerability assessments.

–EOD units have state of the art equipment (Barrett .50 cal rifle and Robotics).

EOD Teams Need Security

EOD companies have no organic security element or sufficient number of personnel to provide their security. Security in support of EOD helps to reduce response times substantially and also allows for a more synergistic response to explosive incidents and enhanced situational awareness (more offensive minded IED operations). This involves training security personnel to look outward, be proactive and actively search crowds, scan rooftops, or other movements that might effect EOD operations. The concept is for security personnel and the EOD team to think of every response to an IED as an offensive operation not just a reaction exercise. All must work as a cohesive team with each focused on inward, outward, and surrounding circumstances, which will effect the operation.

EOD on the Battlefield

EOD battalions provide:

Division to theater analysis

Command and control for EOD companies

Tasking

EOD companies provide:

Brigade to division level analysis

Command and control EOD teams

Tasking

EOD teams provide:

Initial exploitation (minus frequency)

Blast and crater analysis

Initial technical Intelligence

Render Safe Procedures (RSP)

EOD/Engineer Integration

There is a misconception that "Combat Engineers need to have highly specialized EOD training" and that "EOD and the Combat Engineer communities must develop training doctrine to allow Combat Engineers to dispose of unexploded ordnance and weapons caches in order to augment inadequate EOD assets." I submit that EOD and Combat Engineers have different functions and duties and that there has never been a gap. What has existed is a simplification of missions and duties and under utilization of abilities namely EOD. While there are no imbedded EOD planners within brigades, divisions, and corps, the assets were and are available but not necessarily known by all. EOD battalions and groups can and have provided the necessary EOD planning functions for explosive planning at all levels. That utilization has not occurred due to lack of knowledge of EOD operations and under utilization of EOD units. In those instances where there is no apparent EOD planner, Engineer staff elements must remind all that EOD planners are needed and ensure that EOD related issues are accounted for.

The concept is for security personnel and the EOD team to think of every response to an IED as an offensive operation not just a reaction exercise.

Both EOD and Combat Engineers must work as a team to resolve explosive hazards on the battlefield. The newly created Explosive Ordnance Clearance Agent (EOCA) is an example of such an endeavor. The EOCA personnel work directly with their EOD counterpart in dealing with UXOs encountered on the battlefield. For those items that are listed in their publications, they mark it and bypass it, build protective works, blow in place, pick up and carry away, stabilize it, or do nothing and contact EOD. EOCA personnel are not responders nor do they handle IEDs. Communications and coordination between EOD and EOCA are imperative ISO operations. This is part of the graduated response currently proposed. As part of the initial planning sequence EOD and EOCA personnel must plan for explosive hazards that might be encountered on the battlefield to ensure all know the roles and responses. EOCA personnel cannot be the "explosive hazard subject matter expert (SME)" as they do not have the proper training and skill sets;

See **History** page 17

IED 101 from page 7

can expect the enemy to continue to adjust their TTP and develop new methods of disguise, detonation, and destruction. Simple IED construction is not difficult and is being performed by relatively inexperienced insurgents. As defeat mechanisms continue to be enhanced, sources of the original explosives identified and cut off, and the Iraqi populace helps to provide further intelligence assistance to officials trying to end this threat, eventual success will be realized relative to this challenging threat.

Challenge from page 9

Principle Four: If you don't find the bomb maker, they will be back at it again tomorrow, and the next day, and the next…

This commonsense principle is advisory to combat leaders. It encourages leaders to place a high priority on the identification and reduction of bomb makers. Bomb making is a skill practiced by a small number of specialists. They then distribute or sell bombs to others for emplacement and detonation. This situation is much like drug dealing. A small number of manufacturers produce a product that is distributed by others. Taking distributors off the street corners is a useful but inadequate approach to the problem. The real solution is to put the manufacturers out of business. Such is the situation with IED manufacturers. They must be put out of business, killed if necessary. Failure to do so will only ensure a continuation of the current challenges.

Principle Five: Dedicated security—with it EOD Teams can be deployed in minutes…without it Soldiers can sit and become enemy targets. EOD IS READY NOW!

A big reason why Service members violate the first three principles is the mistaken belief that the IED problem in Iraq is too big for EOD alone to tackle. Nothing could be further from the truth, however, EOD units are too small to provide for their own security. The specialized nature of the EOD mission dictates that others are needed to provide security for EOD teams as they travel throughout the battlefield. Brigades that can provide dedicated security for EOD teams often receive a quicker response from those teams, which are then able to render safe the threat.

Both before and since 9/11, EOD members have been on the job all over the world. From deployed locations, they have rendered safe approximately 5,500 IEDs. That number represents a countless number of lives saved. Sadly, 16 EOD members (14 Army/2 USMC) have been killed in action, but less than a third of those by a primary IED. This represents a fatality rate of less than one EOD death for every 1,000 IEDs rendered safe by our EOD Teams. Combined with the hundreds of thousands of items of unexploded ordnance destroyed indicates that EOD members, while conducting some of the most hazardous military operations imaginable, do so successfully, safely, and professionally.

By understanding and embracing the principles outlined above, battlefield leaders will continue to benefit from the EOD record of excellence, lives will be saved, and mission accomplishment potential of the entire coalition effort will be enhanced.

EOD from page 11

with inert ordnance likely to be seen in Afghanistan. Each Marine was issued a UXO card with pertinent information on what to do in an IED strike and what signs to look for. The EOD HQ team studied the tactics used by the Russians during their 10-year war and also the methods used by the Mujahadeen and later the Taliban insurgents. These historical studies were combined with the new technical intelligence reports from various government and civilian agencies. This information enabled the EOD team to assemble a realistic assessment of the enemy threat and likely enemy courses of action; i.e., one of the weapons of choice for the Taliban was the 107mm projectile. When looking in reference material and periodicals the range of this weapon was listed as effective for thousands of meters. This is true when fired from a conventional launcher. The Taliban were forced to use improvised launchers, anything from slats of wood to rock cradles, which greatly reduced the weapons effective firing range to basically line of sight. Knowing this, the force protection measures emplaced around the FOB could be adjusted realistically to this threat. Overall this allowed the best utilization of time available to not only train all EOD technicians but also present the MEU staff and major supported commands with accurate presentations and information on the threat relevant to the unit's fast approaching mission. This unilateral cooperation helped build a situational awareness for Afghanistan that once again validated the current placement and structure of the EOD team. Finally all the information that was already analyzed was cross-referenced against nongovernmental organization (NGO) de-mining data and a database that had all former Soviet minefields plotted. Cross-referencing this data emphasized that the threat was not from the Soviet era occupation and landmines but from the recent insurgent use of ordnance and booby traps in a nonconventional manner.

One of the most important accomplishments during the predeployment training was the relationship established between the EOD OIC and the Combat Engineer OIC. Between the two, all possible scenarios were war-gamed and supported and supporting relationships were discussed and agreed to, depending on the situation found; i.e., if a conventional mine or minefield was encountered this was clearly an Engineer task and EOD would be available to support if required. Likewise if a mine or ordnance item was found and had signs of tampering, or improvised fuzing systems, it would be handled by EOD. This prevented any confusion when the MEU was operational. Having the Combat Engineer squad and the EOD team collocated and traveling together proved to be an effective mine countermeasures asset for the commander.

Once in Afghanistan the EOD team contacted the Army EOD team that had been working in the country for the last year and received several briefs on their lessons learned. The remainder of the time was occupied with personal and team equipment preparation. It was extremely important for all equipment to be made readily deployable while stored in a secure and stable location, whether on a vehicle or load bearing vest, so that it would endure the many hours moving through the mountainous terrain. The next five months would consist of sustained combat operations requiring extensive EOD support. This support was scalable and supported all aspects of the "Three Block

One of the most important accomplishments during the redeployment training was the relationship established between the EOD OIC and the Combat Engineer OIC.


USMC PHOTO BY SGT PAUL MANCUSO

War" theory.

All-encompassing Effort

Overall there was nothing surprisingly new or different about the EOD techniques required. What was new was the manner in which it was done. Every operation or patrol had at least one 2-man EOD response team that was self-reliant for vehicles, communications, and crew-served weapons. The team worked with a standard amount of explosives and specialized EOD tools and could conduct immediate EOD responses upon locating suspect packages and weapons caches. This provided immediate neutralization of emplaced IEDs with advanced firing systems without slowing the momentum of the maneuver element that was engaged in offensive combat operations.

One of the most successful uses of EOD support was the constant coverage by electronic countermeasures (ECM). This technique no doubt saved countless lives and equipment. On one specific occasion the ECM was active while the EOD team performed procedures to neutralize an IED. This whole scenario lasted only a few minutes, which allowed the maneuver element to keep contact with the enemy and eventually fix and kill them.

The standard operating procedure (SOP) for cache destruction in Afghanistan is restricted to EOD forces only. This evolved from several unfortunate accidents and deaths involving UXO and untrained personnel. EOD personnel use specialized tools and procedures to search, identify, and exploit all ordnance items encountered in a cache. Often items may be of intelligence value and reported to the appropriate agency through the chain of command. It was not uncommon for items to be found that were tampered with and designed to kill US Service members if improperly handled; i.e., Russian hand grenades with zero delay fuzes or delay fuzes that were tampered with so that they would function when initially grasped. Timely intelligence concerning ordnance encountered was then reported by the EOD team to units within the MEU and then to the higher echelons. Specific EOD reports with technical field exploitation data were drafted and disseminated by the EOD HQ team in order to support all EOD efforts in theatre.

All available assets available to the MEU were used to defeat IEDs and provided depth to the EOD mission. When planning for ground assault convoys, aviation assets were tasked to provide specific support for EOD tasks. This was an emerging concept and proved to provide positive results on the battlefield. These results were observed by the pilots flying air missions for intelligence teams on the ground. After the manned air coverage, remotely piloted vehicles operating forward of the convoy reported any sightings of suspicious activity which was immediately reported to the convoy commander. Once the EOD team on the ground approached a suspect device, they utilized emerging technology to counter the possibility of the remote-control initiated device detonating. They then continued with rehearsed procedures to neutralize and exploit the ordnance encountered. Dismounted infantry provided over watch to the high ground to deny line-of-site observation from the enemy. These procedures were rehearsed and accomplished in minutes so that the convoy would not become a static target but maintain the momentum of the assault. Less advanced and technical means were also researched and used. They proved to be just as reliable and mission essential as the highly sought after "cutting edge" packages.

A historical database of Russian maps exists which includes all the minefields that were used during their 10-year campaign in Afghanistan. These maps were used as overlays when planning MEU missions to ensure that the ground combat element would not enter any previously laid minefields without the proper planning and equipment. The Russian maps were deconflicted with the recorded efforts of NGOs working in the country. One such organization provided valuable information about the Kandahar Airfield such as the types of mines used and encountered, any deviations from the existing Russian military data, and how existing demining location and recovery tools worked in the Afghan environment.

All mission planning identified the need for organic EOD support. As a result of implementing this concept during Operation Mountain Storm and the 5-month stay in Afghanistan, not a single life was lost due to landmines or IEDs. The MEU destroyed over 50 weapons caches and 90,000 rounds of captured enemy ordnance while accomplishing its mission in the Oruzgan Province.

History from page 13

however, they do possess intermediate knowledge and thus should be used in that capacity. A primary concern is risk versus exploitation of foreign ordnance, booby traps, IED, explosive hazards, Sensitive Site Exploitation (SSE) and Captured Arms and Equipment (CAE). When does the need to exploit outweighed by the risk? In other words allowing personnel to do things they are not trained to do.

The Maneuver Commander

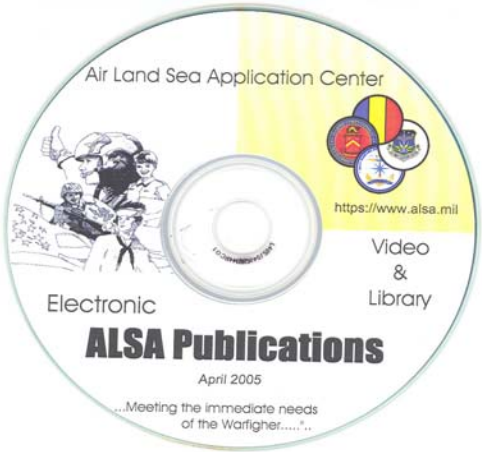
The Maneuver Commander is the one who should decide how to use the assets available to them based upon their mission. EOD will provide the commander with the necessary tools in their toolbox to accomplish that mission effectively, safely, and within the confines of the Army Core Values.

ALSA New Web Page

The new ALSA Web site is hosted by the Air Combat Command at Langley Air Force Base. The Web site features the ALSA electronic library and can be accessed from any ".mil" system at http://www.alsa.mil. The ALSA electronic library can also be accessed over the Secret Internet Protocol Network at http://www.acc.af.smil.mil/alsa.

ALSA CD-ROM

The ALSA CD-ROM is an easily transportable electronic library, including: all multi-Service tactics, techniques, and procedures maintained at ALSA; the history of ALSA; and the ALSA video. Order CDs by e-mailing alsaadmin@langley.af.mil or calling DSN 575-0902, Comm: (757) 225-0902.



ALSA PROJECTS UPDATE CURRENT ALSA PUBLICATIONS			
TITLE	**DATE**	**PUB #**	**DESCRIPTION**
ADUS: *MTTP for Air Defense of the United States* **Classified SECRET/RELCAN**	22 MAR 04	FM 3-01.1 NTTP 3-26.1.1 AFTTP(I) 3-2.50	Supports planners, warfighters, and interagency personnel participating in air defense of the US by providing planning, coordination, and execution information. Pub is primarily focused at the tactical level. Includes Operation Noble Eagle and Clear Skies Exercise lessons learned. **Current Status:** Assess 1 Sep 05 (18mo) Revise 1 Mar 07 (3yr) **POC: Team E** alsae@langley.af.mil
AMCI: *Army and Marine Corps Integration in Joint Operations* **Approved for Public Release**	21 NOV 01 Transitioned to Army Nov 04	FM 3-31.1 (FM 90-31) MCWP 3-36	Describes the capabilities and limitations of selected Army and Marine Corps organizations and provides TTP for the integrated employment of these units in joint operations. The example used is C2 of a notional Army Brigade by a MEF or C2 of a MEB by an Army Corps. **Current Status:** Transitioned 1 Nov 04 (3yr) (New POC is CAC/CADD, Ft. Leavenworth) **ALSA transition POC:** Team F alsaf@langley.af.mil
AVIATION URBAN OPERATIONS: *Multiservice Tactics, Techniques, and Procedures for Aviation Urban Operations* **Distribution Restricted**	15 APR 01	FM 3-06.1 (FM 1-130) MCRP 3-35.3A NTTP 3-01.04 AFTTP(I) 3-2.29	Provides MTTP for tactical-level planning and execution of fixed- and rotary-wing aviation urban operations. **Current Status:** Active. Awaiting Print. **POC: Team E** alsae@langley.af.mil
BREVITY: *Multi-Service Brevity Codes* **Distribution Restricted**	15 JUN 05	FM 1-02.1 (FM 3-54.10) MCRP 3-25B NTTP 6-02.1 AFTTP(I) 3-2.5	Is a dictionary of multi-Service use brevity codes to augment JP 1-02, DOD Dictionary of Military and Associated Terms. This pub standardizes air-to-air, air-to-surface, surface-to-air, and surface-to-surface brevity code words in multi-Service operations. **Current Status:** Active. Printed. **POC: Team F** alsaf@langley.af.mil
COMCAM: *Multi-Service Tactics, Techniques, and Procedures for Joint Combat Camera Operations* **Approved for Public Release**	15 MAR 03	FM 3-55.12 MCRP 3-33.7A NTTP 3-13.12 AFTTP(I) 3-2.41	Fills the void that exists regarding combat camera doctrine, and assists JTF commanders in structuring and employing combat camera assets as an effective operational planning tool. **Current Status:** Assess 1 Sep 04 (18mo) Revise 1 Mar 06 (3yr) **POC: Team C** alsac@langley.af.mil
EOD: *Multi-Service Procedures for Explosive Ordnance Disposal in a Joint Environment* **Approved for Public Release**	15 FEB 01	FM 4-30.16 MCRP 3-17.2C NTTP 3-02.5 AFTTP(I) 3-2.32	Provides guidance and procedures for the employment of a joint explosive ordnance disposal (EOD) force. The manual assists commanders and planners in understanding the EOD capabilities of each Service. **Current Status:** Phase IV edit at ALSA. **POC:** Team B alsab@langley.af.mil
HAVE QUICK: *Multi Service Communications procedures for the Have Quick Radio System* **Distribution Restricted**	MAY 04	FM 6-02.771 MCRP 3-40.3F NTTP 6-02.7 AFTTP(I) 3-2.49	Simplifies planning and coordination of HAVE QUICK radio procedures and responds to the lack of HAVE QUICK TTP throughout the Services. Additionally, it provides operators information on multi-Service HAVE QUICK communication systems while conducting home station training or in preparation for interoperability training. **Current Status:** Assess 1 Nov 05 (18 mo) Revise 1 May 07 (3yr) **POC TEAM C** alsaa@langley.af.mil

ALSA PROJECTS UPDATE CURRENT ALSA PUBLICATIONS			
TITLE	**DATE**	**PUB #**	**DESCRIPTION**
HF-ALE*: Multi-Service Tactics, Techniques, and Procedures for the High Frequency-Automatic Link Establishment (HF-ALE) Radios* **Approved for Public Release**	1 SEP 03	FM 6-02.74 MCRP 3-40.3E NTTP 6-02.6 AFTTP(I) 3-2.48	Standardizes high power and low power HF-ALE operations across the Services and enable joint forces to use HF radio as a supplement / alternative to overburdened SATCOM systems for over-the-horizon communications. **Current Status:** Assess 1 Mar 05 (18mo) Revise 1 Sep 06 (3yr) **POC: Team C** alsac@langley.af.mil
IADS: *Multi-Service Tactics, Techniques, and Procedures for an Integrated Air Defense System(IADS)* **Distribution Restricted**	30 OCT 04	FM 3-01.15 MCRP 3-25E NTTP 3-01.8 AFTTP(I) 3-2.31	Provides joint planners with a consolidated reference on Service air defense systems, processes, and structures, to include integration procedures. **Current Status:** Assess 1 Jan 06 (18 mo) Revise 30 Oct 07 (3yr) **POC: Team D** alsad@langley.af.mil
ICAC2: *Multi-Service Procedures for Integrated Combat Airspace Command and Control* **Approved for Public Release**	30 JUN 00 Retain until TAGS Revision	FM 3-52.1 (FM 100-103-1) MCRP 3-25D NTTP 3-52.1(Rev A) AFTTP(I) 3-2.16	Provides detailed TTP for airspace C2 to include specialized missions not covered in JP 3-52, Doctrine for Joint Airspace Control in a Combat Zone. Includes specific information on interfaces and communications required to support integrated airspace control in a multi-Service environment. **Current Status:** At Nov 04 JASC, Services agreed to retain ICAC2 until TAGS is assessed in May 05. Will incorporate portions of ICAC2 that did not transition to JP 3-52 into next TAGS revision. **POC: Team D** alsad@langley.af.mil
IDM: *Multi-Service Tactics, Techniques, and Procedures for the Improved Data Modem Integration* **Distribution Restricted**	30 MAY 03	FM 6-02.76 MCRP 3-25G NTTP 6-02.3 AFTTP(I) 3-2.38	Provides digital connectivity to a variety of attack and reconnaissance aircraft; facilitates exchange of near-real-time targeting data and improves tactical situational awareness by providing a concise picture of the multi-dimensional battlefield. **Current Status:** Assess 1 Nov 04 (18mo) Revise 1 May 06 (3yr) **POC: Team F** alsaf@langley.af.mil
IFF: *MTTP for Mk XII Mode 4 Security Issues in a Joint Integrated Air Defense System* **Classified SECRET**	11 DEC 03	FM 3-01.61 MCWP 3-25.11 NTTP 6-02.4 AFTTP(I) 3-2.39	Educates the warfighter to security issues associated with using the Mark XII IFF Mode 4 Combat Identification System in a joint integrated air defense environment. It captures TTP used today by the warfighter that can address those security issues. **Current Status:** Assessed 1 Jun 05 (18mo) Revise 1 Dec 06 (3yr) **POC: Team A** alsaa@langley.af.mil
INTERPRETER OPERATIONS **FOUO**	APR 04	Center for Army Lessons Learned (CALL) Handbook 04-7	Team B will monitor this project for 18 months following the release of the handbook and then decide whether to develop as an MTTP or remove it as a monitored project. **Current Status:** Complete. Available electronically at call.army.mil. **POC Team B** alsab@langley.af.mil

ALSA PROJECTS UPDATE CURRENT ALSA PUBLICATIONS			
TITLE	**DATE**	**PUB #**	**DESCRIPTION**
JAOC / AAMDC*: Multi-Service Tactics, Techniques, and Procedures for Joint Air Operations Center and Army Air and Missile Defense Command Coordination* **Distribution Restricted**	22 Mar 04	FM 3-01.20 AFTTP(I) 3-2.30	Addresses coordination requirements between the Joint Air Operations Center and the Army Air and Missile Defense Command. Assists the JFC, JFACC, and their staffs in developing a coherent approach to planning and execution of AMD operations. **Current Status:** Assess 1 Sep 05 (18mo) Revise 1 Mar 07 (3yr) **POC: Team D** alsad@langley.af.mil
JATC: *Multi-Service Procedures for Joint Air Traffic Control* **Distribution Restricted**	17 JUL 03	FM 3-52.3 (FM 100-104) MCRP 3-25A NTTP 3-56.3 AFTTP(I) 3-2.23	Is a ready reference source for guidance on ATC responsibilities, procedures, and employment in a joint environment. Discusses JATC employment and Service relationships for initial, transition, and sustained ATC operations across the spectrum of joint operations within the theater or area of responsibility (AOR). **Current Status:** Assess 1 Jan 05 (18mo) Revise 1 Jul 06 (3yr) **POC: Team F** alsaf@langley.af.mil
JFIRE: *Multiservice Procedures for the Joint Application of Firepower(JFIRE)* **Distribution Restricted**	30 OCT 04	FM 3-09.32 MCRP 3-16.6A NTTP 3-09.2 AFTTP(I) 3-2.6	Is a pocketsize guide of procedures for calls for fire, CAS, and naval gunfire. Provides tactics for joint operations between attack helicopters and fixed-wing aircraft performing integrated battlefield operations. **Current Status:** Assess 1 Jan 06 (18 mo) Revise 30 Oct 07 (3yr) **POC: Team A** alsaa@langley.af..mil
JSEAD / ARM-J: *Multi Service Tactics, Techniques, and Procedures for the Suppression of Enemy Air Defenses in a Joint Environment* **Classified SECRET**	28 May 04	FM 3-01.4 MCRP 3-22.2A NTTP 3-01.42 AFTTP(I) 3-2.28	Fills a planning and employment void not captured in existing Joint Tactics Techniques and Procedures. It contributes to Service interoperability by providing the JTF and subordinate commanders, their staffs, and SEAD operators a single, consolidated reference. Additionally, this publication discusses the employment of intelligence, surveillance, and reconnaissance assets, electronic and destructive attack weapons systems to destroy/disrupt/degrade the enemy's air defenses. It also incorporates appropriate anti-radiation missile information. **Current Status:** Assess 1 Nov 05 (18 mo) Revise 1 May 07 (3yr) **POC: Team A** alsaa@langley.af.mil
JSTARS: *Multi-Service Tactics, Techniques, and Procedures for the Joint Surveillance Target Attack Radar System* **Distribution Restricted**	17 MAR 03	FM 3-55.6 (FM 90-37) MCRP 2-1E NTTP 3-55.13 (Rev A) AFTTP(I) 3-2.2	Provides procedures for the employment of the Joint Surveillance Target Attack Radar System (JSTARS) in dedicated support to the JFC. Revision will be unclassified. The unclassified revision describes multi-Service TTP for consideration and use during planning and employment of the JSTARS. **Current Status:** Assessed "retain at ALSA." Expect to revise due to OEF/OIF lessons learned, with early revision aligned with AFTTP 3-1.30 (JSTARS) rewrite conference. Revise 1 Dec 05 (3yr) **POC: Team D** alsad@langley.af.mil

ALSA PROJECTS UPDATE CURRENT ALSA PUBLICATIONS			
TITLE	**DATE**	**PUB #**	**DESCRIPTION**
JTF IM: *Multiservice Tactics, Techniques, and Procedures for Joint Task Force Information Management* **Distribution Restricted**	10 SEP 03	FM 6-02.85 (FM 101-4) MCRP 3-40.2A NTTP 3-13.1.16 AFTTP(I) 3-2.22	Describes how to manage, control, and protect information in a JTF headquarters conducting continuous operations. **Current Status:** Assess 1 Mar 05 (18mo) Revise 1 Sep 06 (3yr) **POC: Team C** alsac@langley.af.mil
JTF LNO Integration: *Multiservice Tactics, Techniques, And Procedures For Joint Task Force (JTF) Liaison Officer Integration* **Distribution Restricted**	27 JAN 03	FM 5-01.12 (FM 90-41) MCRP 5-1.B NTTP 5-02 AFTTP(I) 3-2.21	Defines liaison functions and responsibilities associated with operating a JTF. **Current Status:** Assess 27 Jun 04 (18 mo) Revise 27 Jan 06 **POC: Team G** alsag@langley.af.mil
JTMTD: *Multiservice Procedures for Joint Theater Missile Target Development* **Distribution Restricted**	11 Nov 03	FM 3-01.51 (FM 90-43) NTTP 3-01.13 AFTTP(I) 3-2.24	Documents TTPs for threat missile target development in early entry and mature theater operations. It provides a common understanding of the threat missile target set and information on the component elements involved in target development and attack operations. **Current Status:** Assessed "Transition to JP 3-60, *Targeting,* JP 3-01; *Countering Air and Missile Threats;* and other ALSA MTTPs. **POC: Team D** alsad@langley.af.mil
KILL BOX: *MTTP for Kill Box Operations* **Distribution Restricted**	JUN 05	FM 3-09.34 MCRP 3-25H NTTP 3-09.2.1 AFTTP(I) 3-2.59	This MTTP assists the Services and Joint Force Commanders in developing, establishing, and executing Kill Box procedures to allow rapid target engagement. This MTTP describes timely, effective multi-service solutions to FSCMs, ACMs, and maneuver control measures with respect to Kill Box operations. **Current Status:** Approved 15 JUN 05. Printed. **POC: Team B** alsab@langley.af.mil
NLW: *Tactical Employment of Nonlethal Weapons* **Approved for Public Release**	15 JAN 03	FM 3-22.40 (FM 90-40) MCWP 3-15.8 NTTP 3-07.3.2 AFTTP(I) 3-2.45 USCG Pub 3-07.31	Supplements established doctrine and TTP providing reference material to assist commanders and staffs in planning/coordinating tactical operations. It incorporates the latest lessons learned from real world and training operations, and examples of TTP from various sources. **Current Status:** Assess 15 Jul 04 (18mo) Revise 1 Jan 06 (3yr) **POC: Team F** alsaf@langley.af.mil
PEACE OPS: *MTTP for Conducting Peace Operations* **Approved for Public Release**	26 OCT 03	FM 3-07.31 MCWP 3-33.8 AFTTP(I) 3-2.40	Provides tactical level guidance to the warfighter for conducting peace operations. **Current Status:** Assess 1 Apr 05 (18 mo) Revise 1 Oct 06 (3yr) **POC: Team E** alsae@langley.af.mil
REPROGRAMMING: *Multi-Service Tactics, Techniques, and Procedures for the Reprogramming of Electronic Warfare and Target Sensing Systems* **Distribution Restricted**	6 JAN 03	FM 3-51.1 (FM 34-72) MCRP 3-40.5B NTTP 3-13.1.15 AFTTP(I) 3-2.7	Supports the JTF staff in the planning, coordinating, and executing of reprogramming of electronic warfare and target sensing systems as part of joint force command and control warfare operations. **Current Status**: Assess 6 Jul 04 (18mo) Revise 6 Jan 06 (3yr) **POC: Team G** alsag@langley.af.mil

ALSA PROJECTS UPDATE CURRENT ALSA PUBLICATIONS			
TITLE	**DATE**	**PUB #**	**DESCRIPTION**
RISK MANAGEMENT **Approved for Public Release**	15 FEB 01	FM 3-100.12 (FM 5-19.1) MCRP 5-12.1C NTTP 5-03.5 AFTTP(I) 3-2.34	Provides a consolidated multi-Service reference, addressing risk management background, principles, and application procedures. To facilitate multi-Service interoperability, it identifies and explains the risk management process and its differences and similarities as it is applied by each Service. **Current Status:** Assess 15 Aug 05 (18 mo) Revise 15 Feb 07 (3 yr) **POC: Team G** alsag@langley.af.mil
SURVIVAL, EVASION, AND RECOVERY*: Multi Service Procedures for Survival, Evasion, and Recovery* **Distribution Restricted**	19 MAR 03	FM 3-50.3 (FM 21-76-1) MCRP 3-02H NTTP 3-50.3 AFTTP(I) 3-2.26	Provides a weather-proof, pocket-sized, quick reference guide of basic survival information to assist Service members in a survival situation regardless of geographic location. **Current Status:** Revise 1 Mar 06 (3yr) **POC: Team B** alsab@langley.af.mil
TACTICAL CONVOY OPERATIONS: *MTTP for Tactical Convoy Operations* **Distribution Restricted**	MAR 05	FM 4-01.45 MCRP 4-11.3H NTTP 4-01.3 AFTTP(I) 3-2.58	Consolidates the Services' best tactics, techniques, and procedures used in convoy operations into a single multi-Service TTP. This MTTP focuses on combat support and combat service support forces and provides a quick reference guide for convoy commanders and subordinates on how to plan, train, and conduct tactical convoy operations in the contemporary operating environment. **Current Status:** Active. In distribution. **POC: Team E** alsae@langley.af.mil
TACTICAL RADIOS: *Multi-Service Communications Procedures for Tactical Radios in a Joint Environment* **Approved for Public Release**	14 JUN 02	FM 6-02.72 (FM 11-1) MCRP 3-40.3A NTTP 6-02.2 AFTTP(I) 3-2.18	Standardizes joint operational procedures for Single-Channel Ground and Airborne Radio Systems (SINCGARS) and provides and overview of the multi-Service applications of Enhanced Position Location Reporting System (EPLARS). **Current Status:** Assess 14 Dec 06 (18mo) Revise 14 Jun 08 (3 yr) **POC: Team G** alsag@langley.af.mil
TADIL-J*: Introduction to Tactical Digital Information Link J and Quick Reference Guide* **Approved for Public Release**	30 JUN 00 Transitioned to FORSCOM NOV 04	FM 6-24.8 (FM 6-02.241) MCRP 3-25C NTTP 6-02.5 AFTTP(I) 3-2.27	Provides a guide for warfighters with limited or no experience or background in TADIL J and needing a quick orientation for supplemental or in-depth information. TADIL J is also known in NATO as Link 16. **Current Status:** Transitioned. Incorporated into FORSCOM Joint Tactical Air Operations (JTAO) Procedural Handbook **POC: Team C** alsac@langley.af.mil
TAGS*: Multi-Service Tactics, Techniques, and Procedures for the Theater Air Ground System* **Approved for Public Release**	8 DEC 03	FM 3-52.2 (FM 100-103-2) MCRP 3-25F NTTP 3-56.2 AFTTP(I) 3-2.17	Promotes inter-Service awareness regarding the role of airpower in support of the JFC's campaign plan, increases understanding of the air-ground system, and provides planning considerations for the conduct of air-ground operations. **Current Status:** Assessed "Revise at ALSA." Revision accelerated to begin 1 Dec 05 (3yr), and will include portions of ICAC2 that did not transition to JP 3-52. **POC: Team D** alsad@langley.af.mil

ALSA PROJECTS UPDATE CURRENT ALSA PUBLICATIONS			
TITLE	**DATE**	**PUB #**	**DESCRIPTION**
TMD IPB: *Multi-Service Tactics, Techniques, and Procedures for Theater Missile Defense Intelligence Preparation of the Battlespace* **Approved for Public Release**	4 MAR 02 Transitioned to Army NOV 04	FM 3-01.16 MCRP 2-12.1A NTTP 2.01.2 AFTTP(I) 3-2.36	Provides a systematic and common methodology for analyzing the theater adversary missile force in its operating environment. **Current Status:** Transitioned. (New POC is CAC/CADD, Ft. Leavenworth) **POC: Team B** alsab@langley.af.mil
TST: *MTTP for Targeting Time-Sensitive Targets* **Distribution Restricted**	20 APR 04	FM 3-60.1 MCRP 3-16D NTTP 3-60.1 AFTTP(I) 3-2.3	Provides the JFC, the JFC's operational staff, and components unclassified MTTP to coordinate, de-conflict, synchronize, and prosecute TSTs within any AOR. Includes OIF and OEF lessons learned, multinational and other government agency considerations. Appendix D– COMUSCENTAF Counter-SCUD CONOPS and Playbook (SECRET REL GBR/AUS) Appendix F–TST Collaboration Tools Appendix G– CGRS (Available via electronic means only.) **Current Status:** Assess 1 Oct 05 (18mo) Revise 1 Apr 07 (3yr) **POC: Team F** alsaf@langley.af.mil
UHF TACSAT/ DAMA OPERATIONS: *Multi Service Tactics, Techniques, and Procedures package for UHF TACSAT Frequency Management* **Approved for Public Release**	JUN 04	FM 6-02.90 MCRP 3-40.3G NTTP 6-02.9 AFTTP(I) 3-2.53	Documents TTP that will improve efficiency at the planner and user levels. (Recent operations at JTF level have demonstrated difficulties in managing limited number of UHF TACSAT frequencies.) **Current Status:** Assess 1 Dec 05 (18mo) Revise 1 Jun 07 (3yr) **POC: Team C** alsac@langley.af.mil
UXO: *Multi-Service Procedures for Unexploded Ordnance Operations (UXO)* **Approved for Public Release**	23 AUG 01	FM 3-100.38 MCRP 3-17.2B NTTP 3-02.4.1 AFTTP(I) 3-2.12	Describes hazards of unexploded explosive ordnance (UXO) sub-munitions to land operations, addresses UXO planning considerations, and describes the architecture for reporting and tracking UXO during combat and post conflict. **Current Status:** Phase V, Command Approval **POC: Team B** alsab@langley.af.mil

NEW ALSA PROJECTS			
TITLE	**EST PUB DATE**	**PUB #**	**DESCRIPTION AND STATUS**
CORDON AND SEARCH: *MTTP for Cordon and Search Operations*	MAR 06	FM xxx MCRP xxx NTTP xxx AFTTO(I) xxx	Consolidates the Services' best tactics, techniques, and procedures used in cordon and search operations into a single multi-Service TTP. This MTTP focuses on tactical level units and provides a quick reference guide for conventional ground forces, Special Operations Forces and aviation personnel on how to plan, train, and conduct cordon and search operations in the contemporary operating environment. **Current Status:** Phase III **POC: Team F** alsaef@langley.af.mil
DETAINEE OPERATIONS: *MTTP for Detainee Operations in a Joint Environment* **Distribution Restricted**	NOV 05	FM 3-19.401 MCRP 4-11.8D NTTP 3-07.8 AFTTP(I) 3-2.51	MTTP regarding detainee operations to include transporting, transferring and holding of the high-risk detainees. **Current Status:** Phase III, 2nd WWR completed, currently being updated. **POC: Team B** alsab@langley.af.mil

ALSA CENTER
ATTN: ALSB
114 ANDREWS STREET
LANGLEY AFB VA 23665-2785

OFFICIAL BUSINESS